

IN THE CLAIMS

Please amend the claims to read as follows. New claims 34-46 are provided. A marked-up sheet showing the changes is attached.

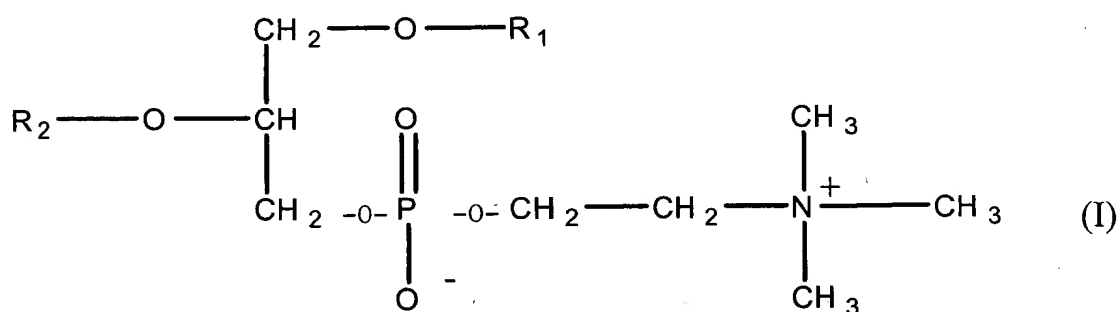
1. (amended) An agent for effecting gene transfer, comprising
 - (a) one or more genetic materials,
 - (b) liposomes chosen from the group consisting of PEG-liposomes, immuno-liposomes, immuno/PEG-liposomes, cationic liposomes, and polymer-modified liposomes, the genetic materials being not encapsulated or encapsulated therein
 - (c) a drug carrier embolization system (DCES) comprising one or more chosen from the group consisting of lyophilized or degradable starch particles, gelatin and polymer particles, and
 - (d) a contrasting agent containing a compound chosen from the group consisting of iodine, gadolinium, magnetite and fluorine.
- 15 2. (amended) The agent of claim 1, the genetic materials are chosen from the group consisting of DNA, RNA, ribozyme and antisense oligonucleotides.
3. (twice amended) The agent claim 1, wherein the genetic materials are chosen from the group consisting of therapy genes, anti-angiogenesis genes, apoptosis genes, optionally in combination with marker genes, under optionally inducible, optionally tissue-specific promoters.
4. (amended) The agent of claim 3, further comprising proteins which assist in packing DNA more tightly.
5. (twice amended) The agent of claim 3, wherein the genetic material is chosen from the group consisting of suicide genes, herpes simple- virus thymidine kinase gene (HSVtk), deaminase gene, NR/CB1954, pyrine nucleoside phosphorylase and the cytokinin genes IL-2, IL-4, IL-6, IL-10, IL- 12 and IL-15.
6. (twice amended) The agent of claim 1, wherein the liposomes comprise a) a natural, semi-synthetic or completely synthetic

amphiphil, b) a steroid, c) a charged lipid component, d) a water-or lipid-soluble genetic material and/or e) a carrier liquid

7. (amended) The agent of claim 6, wherein the quantitative ratio of a to b to c is in the molar ratio of 1: 0.3 : 0.1 to 1 : 1 : 0.1 or 1 : 1 : 0.5 and the molar ratio of c to d is 2 : 1 to 10 : 1.

8. (amended) The agent of claim 6, wherein the amphiphil chosen from the group consisting of a lipid, a surfactant, an emulsifier, polyethylene glycol (PEG) and lipid-PEG.

9. (amended) The agent of claim 6, wherein the amphiphil is a compound of the general formula I



in which R₁ and R₂ represent C₁₀ to C₂₀ alkanoyl, alkenoyl, alkyl or alkenyl.

10. (twice amended) The agent of claim 6, wherein the steroid is chosen from the group consisting of cholesterol, diethoxycholesterol and sitosterol.

11. (twice amended) The agent claim 6, wherein the charged lipid component is chosen from the group consisting of the anion of diacetyl phosphate, of palmitic acid and of stearic acid; the anion of a phospholipid, ; the anion of a sphingolipid; and polyethylene glycol (PEG).

12. The agent of claim 11, wherein the charged lipid component is fluorinated.

13. (twice amended) The agent of claim 6, wherein the amphiphile further comprises polymer particles in the form of a 25% aqueous solution of Poloxamer® as additional inert materials.

14. (twice amended) The agent of claim 1, wherein the genetic materials are present in a form chosen from the group consisting of

SUV (small unilamellar vesicles) PEG liposomes, LUV (large unilamellar vesicles) PEG liposomes, REV (reverse phase evaporation vesicles) PEG liposomes, MLV (multilamellar vesicles) PEG liposomes, anti-Ki-67-immune PEG liposomes, anti-CEA PEG liposomes and PEG DAC-Chol liposomes.

15. (twice amended) The agent of claim 1, comprising starch particles are lyophilized, and are present in a size of 40 - 90 μm and are in a physiological salt solution in a concentration of 5 to 70 mg/mL.

16. The agent of claim 15, wherein the starch particles have a particle size of 60 to 90 μm .

17. (twice amended) The agent of claim 1, comprising absorbable gelatin powder.

18. (twice amended) The agent of claim 1, wherein the agent contains phenyl derivatives with one or more iodine substituents as iodine-containing contrasting agent.

19. (amended) The agent of claim 18, wherein the agent further comprises one chosen from the group consisting of Iopromide®, Ioxitalamate®, Ioxaglate®, Iopamidol®, Iohexol®, Iotralon®, Metrizamide® and Ultravis®.

20. (twice amended) The agent of claim 1, wherein the agent contains fluorinated lipids as contrasting agent.

21. (twice amended) The agent of claim 1, wherein the agent contains 30 to 90 mg of lyophilized or degradable starch particles and 5 to 100 mg of genetic material, which is or is not encapsulated.

22. (twice amended) The agent of claim 1, wherein

(a) the genetic material is LacZ marker gene and pUT HSVtk suicide gene,

(b) encapsulated in MLV PEG liposome,

(c) the DCES is starch particles being Spherex® or Gelfoam®, and

(d) the contrasting agent is fluorinated.

23. (twice amended) A method for producing an agent for effecting gene transfer, wherein 30 to 90 mg of a compound chosen from the group consisting of lyophilized or degradable starch particles, gelatin and polymer particles are dissolved in 3 to 6 mL of contrasting agent and, subsequently, a therapeutical amount of

genetic material is added, to thereby produce the agent for effecting gene transfer.

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24. (twice amended) The method according to claim 23, wherein the therapeutic amount of a genetic material and optionally a complexing agent are dissolved in one or more lipids and mixed with the starch particles and the contrasting agent.

34. (new) The agent of claim 1, wherein the genetic material is encapsulated in MLV PEG, and the DCES is starch particles.

35. (new) The agent of claim 34, comprising 30 to 90 mg of starch particles and 5 to 100 mg of genetic material.

36. (new) The agent of claim 34, wherein the starch particles are of a size 40-90 μm .

37. (new) The agent of claim 1, wherein the polymer particles are nanoparticles.

38. (new) The agent of claim 3, wherein the therapy genes are chosen from the group consisting of suicide genes, cytokin genes and chemokin genes (MIP1 α , MCP); the anti-angiogenesis genes are vascular endothelial growth factor (VEGF); the apoptosis genes are chosen from the group consisting of , apoptin and natural born killer (NbK); and the marker genes are chosen from the group consisting of green fluorescence protein (GFP) and galactosidase gene (LacZ).

39. (new) The agent of claim 4, wherein the proteins are chosen from the group consisting of nuclear capsid protein (NCP 7), HMG, polyethylene imine, poly-L-lysine, and protamine sulfate.

40. (new) The agent of claim 11, wherein the phospholipid is chosen from the group consisting of phosphatidyl serine and phosphatid acid; the sphingolipid is sulfatid; and the PEG is MPEG.

41. (new) A method for gene transfer and gene therapy of liver metastases; tumors of the lung, bladder, head and neck, urogenitals, lymph nodes, breasts; glioblastoma; arthritis; and asthma, comprising the step of administering a pharmaceutical agent according to the agent for effecting gene transfer of claim 1, intraarterially or locally, whereby a substantial decrease in size of tumor is effected.

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42. (new) The method of claim 41, wherein the treatment is for liver metastates, and the agent is administered intraarterially.

43. (new) The method of claim 42, wherein the agent comprises genetic material encapsulated in MLV PEG, and the DCES is starch particles.

44. (new) The method of claim 43, wherein the agent comprises 30 to 90 mg starch particles and 5 to 100 mg of genetic material.

45. (new) The method of claim 43, wherein the genetic material includes pUT 649.

46. (new) A method for the treatment of any of the diseases neurodegenerative and autoimmune diseases; Parkinson's disease, Alzheimer's disease and multiple sclerosis; diabetes type I, diseases accompanying transplantations; restenosis; and high blood pressure; comprising the step of administering as pharmaceutical agent the agent according to claim 1.
